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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/776,680

02/10/2004

Yun-hyeok Im

9898-331

3786

20575 7590 06/05/2007  
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EXAMINER

CIRIC, LJILJANA V

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

06/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/776,680

Applicant(s)

IM ET AL.

Examiner

Ljiljana (Lil) V. Ciric

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 13,31 and 32 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-21 is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9,11,12,14-16 and 22-30 is/are rejected.
- 7) ☒ Claim(s) 4,5,10 and 17 is/are objected to.
- 8) ☒ Claim(s) 1-32 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20040210.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of the invention of Group I (readable on claims 1 through 30) in the reply filed on March 7, 2007 and of the third species or the embodiment of Figures 9, 16, and 17 in the reply filed on October 19, 2006 are acknowledged.
2. Claims 13 (readable on the non-elected species characterized by a c-shaped spring) and 31 and 32 (readable on the non-elected Group II) are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the replies filed on March 7, 2007 and on October 19, 2006.

### *Priority*

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

4. The drawings are objected to because Figures 7 and 8 lack any corresponding reference characters and thus lack clarity. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either

Art Unit: 3744

“Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

5. The abstract of the disclosure is objected to because it refers to the claims (i.e., “Other embodiments of the invention are described in the claims.”). Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 11, 15, and 22 through 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of apparatus claims 11 and 15 appears to attempt to positively recite process steps, thus rendering indefinite the metes and bounds of protection sought thereby.

With regard to claim 22 and claims 23 through 30 depending therefrom, the term “relatively” is a relative term which renders the claim indefinite. The term “relatively” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus, as used in an attempt to qualify the shape of the substrate, this term renders the same indefinite.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3744

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1 through 3, 6, 11, 12, 14 through 16, and 22 through 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakagawa et al. ('148).

Nakagawa et al. discloses an apparatus or notebook computer including two heat exchange members disposed in the body part 1 and the display part 2, respectively, as shown in Figure 2, for example, and also including a connection member or hinge and a biasing member or spring, the latter as shown in Figure 9, for example.

The reference thus reads on the claims.

10. Alternately, claims 22 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Dockerty et al.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

***Claim Rejections - 35 USC § 103***

Art Unit: 3744

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 7 through 9, and 28 through 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. ('148).

Nakagawa et al. discloses the inventive apparatus essentially as claimed, but fails to provide specifics relating to the materials of construction, including the substrate being made of aluminum and there being a thermal interface material such as a thermal tape or grease or epoxy disposed between at least one of the heat exchange members and a surface of the heat-generating packages. Nevertheless, Official Notice is hereby taken that it is notoriously well-known in the art to make substrates from various light-weight and heat conductive materials, including aluminum, and also to dispose thermal interface materials between heat-generating elements and their respective heat exchange members in order to optimize both heat transfer effectiveness and manufacturability. Thus, it would have been obvious to one skilled in the art at the time of invention to modify the apparatus of Nakagawa et al. by selecting aluminum as a material for the substrate and by adding a thermal interface material between the heat-generating packages and the heat exchange members in order to improve heat dissipation from the heat generating packages without adding significantly to the size and weight of the electronic apparatus of which these are part.

*Allowable Subject Matter*

13. Claims 4, 5, 10, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Claim 18 through 21 are allowed.

Art Unit: 3744

*Conclusion*

15. The additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner works a flexible work schedule but can normally be reached on most days during the work week between the hours of 10:30 a.m. and 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ljiljana (Lil) V. Ciric  
Primary Examiner  
Art Unit 3744